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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/037,630
Filing Date: January 03, 2002
Appellant(s): SCOTT, J. BLAKE

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J. Blake Scott
For Appellant

**CORRECTED SUPPLEMENTAL
EXAMINER'S ANSWER**

This is in response to the appeal brief filed 7/15/06 appealing from the Office action mailed 4/6/06 and the 2/1/07 Appeal Center Return because of the missing heading "Related Proceedings Appendix". This corrected answer now contains the "Related Proceedings Appendix" required by 37 CFR 41.39. This supplemental examiner's answer also responds to applicants' 1/22/07 reply brief.

Note: The appellants should disregard the examiner's 5/11/07 Notice of Non-Compliant Appeal Brief. The examiner made a mistake in this submission and regrets the error because the applicants' response correcting their defective appeal brief was sufficient. Patent Appeals Specialist Tim Cole issued a Notification of Non-Compliant Appeal Brief (37 CFR 41.37) on 2/5/07 noting that the brief did not contain a statement of the status of all claims (e.g. rejected, allowed, withdrawn, objected to, canceled) or does not identify the appealed claims (37 CFR 41.37(c)). The appellants corrected Tim' Cole's notification of Non-Compliant Appeal Brief in their 2/13/07 by providing the heading Status of Claims and also indicating claims 1-20 are finally rejected and being appealed. Appellants response is proper and their appeal brief is now fully compliant.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: Claims 1-20 are no longer rejected over Polston (US Patent No. 6,706,108 B2).

Allowable Claims:

Claims 6, 7, 11, 12, 14, and 15 are allowable. Polston does not teach a mixture of Portland cement and class C fly ash. Further, Polston teaches that fly ash and cement are "binders" and does not give any indication that fly ash is also an aggregate of his invention (see column 2, lines 45-46). Thus, there is no teaching in Polston to mix both fly ash (or class C fly ash for that matter) with Portland cement.

Revised Ground of Rejection to be Reviewed on Appeal:

Claims 1-5, 8-10, 13, and 16-20 are rejected under 35 USC 103(a) over Polston '108 B2.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,706,108 B2

Polston

3-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-5, 8-10,13, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Polston '108 B2.

Polston teaches a method of making a road base by mixing drill cuttings and pozzolan, cement, fly ash, lime, or lime kiln dust (see column 2, line 46). Polston further teaches mixing an asphalt emulsifier in the binder to manufacture asphalt stabilized road base (see col.2, line 48-49). Polston would appear to differ from appellant's claimed process in that he does not teach a load bearing structure. However, one of ordinary skill in the art would have understood that a *road base* can still be construed or interpreted to mean a load bearing structure.

Further, the appellant's limitation of *said load bearing structure having sufficient resistance to rutting that any rut formed in such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch* would have have been a property expected because the prior art mixes the same components to form a road base which is a load bearing structure.

(10) Response to Argument

The examiner has allowed claims 6,7,11,12, and 15 because Polston does not teach mixing fly ash with cement and thus these are deemed allowable. This argument presented by appellant is now moot.

The appellant next re-argues the Declaration under 37 CFR 1.132 by Mr. Dallas N. Little. Again, it is acknowledged that Mr. Little's credentials are impressive and he is most certainly an expert in this art. However this declaration is an opinion declaration of an expert in the art and while the opinion declaration is given some weight, it does not necessarily overcome the prima facie case of obviousness set forth by the examiner. Setting forth an expert analysis or opinion cannot replace or substitute experimental evidence or data supporting such opinions or positions. Appellants have so far presented no experimental evidence to bolster their opinion or position.

The appellant next states that Polston does not give any experimental data on rutting or plastic deformation resistance. In rebuttal, the examiner has set forth the case of prima facie obviousness that the same mixture of components would also result in the same properties including rutting or plastic deformation resistance. It is also noted that the burden is upon the appellant to rebut the examiner's prima case of obviousness by means such as presenting experimental data showing his position is not correct. The appellant has presented no experimental evidence rebutting the examiner's position as stated above.

The appellant next argues page 178 of the Standard Specifications for Construction of Highways, Streets and Bridges Edition published by the Texas Department of Transportation. This document teaches particulate road base Grade 1 is not required to have more than 45 psi of compressive strength while an intermediate quality of road base may have a value of as little as 35 psi, and acceptable particulate road base has no quantitative requirement at all for compressive strength. In rebuttal,

this document does not necessarily teach away from the examiner's position because it merely states that Grade 1 is "not required" to have more than 45 psi compressive strength or intermediate road base about 35 psi. This document does not state that it *cannot or must not be greater than 45 psi* for road base compressive strength. Thus, there is a degree of choice and there is no upper limit on compressive strength for road bases. It may not be required or preferred to have higher than 45 psi compressive strength for road base but this does not mean the road base compressive strength cannot be greater. Further, this road standard for road base is only directed to the state of *Texas* and it could be very well be that in other states, Canada, Europe, Asia, Australia, etc. the standard for road base compressive strength may very well be higher. Appellant cannot apply the standard for one state and apply it to the entire country or even globally because standards are not necessarily and likely not the same in other places.

The appellant has argued *reasonable expectation*. In rebuttal, the examiner has shown reasonable expectation because he mixes the same components as appellant's claimed process and the those resulting properties would have reasonably expected to be the same absent evidence to the contrary.

The appellant also notes that the examiner has offered no evidence to show this property of sufficient rutting resistance would have been the same as for their own invention. In rebuttal, the examiner has stated that Polston mixes the same components to form a road base load bearing structure that would have been expected to result in the same properties. The appellant is reminded that the burden is on him (not the

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examiner) to provide experimental evidence rebutting the examiner's prima facie case of obviousness. It is further noted that the examiner is not relying on common knowledge but is relying on the teaching of Polston which teaches the same components as used by applicants to make a road base (load bearing structure) and the properties resulting would have been expected to be the same.

The appellant next refers to their specification and imply that if compressive strengths are lower than 100 psi (as set forth on p.25 line 28 of appellant's specification), than by implication any product below this 100 psi value cannot be satisfactory. Appellant appears to assume what was stated on page 178 of the Standard Specifications for Construction of Highways, Streets and Bridges Edition published by the Texas Department of Transportation. This document teaches particulate road base Grade 1 is not required to have more than 45 psi of compressive strength. Again, there is no requirement that the road base strength "must" be 45 psi or less so appellant cannot assume this in their reasoning.

The appellant refers to page 29-Table 4; page 34-Table 6; page 35-Table 9; page 38-Table 12 and their examples to show that Polston teaches away from their claims. In rebuttal, all of these examples and results are not convincing because they are not commensurate in scope with the claimed invention. Polston does not limit his invention to any specific amounts of cement or fly ash as shown by his claims 1 through 14. Further, the appellant's own claims (such as independent claims) contain no specific amounts required for their own invention (e.g. see appellant claim 1 which contains absolutely no amounts of any stabilizer component such as hydrated lime,

Portland cement, cement kiln dust, etc. These results cannot be substituted for the whole teaching of Polston.

Appellant also argues that a *road base* is not a *load bearing structure* as used in their instant claims. The examiner disagrees. Even if a road base is a sublayer, its still bears the load underneath the road top layer, does it not? A road base material still is a structure that handles loads bearing upon it and thus is a load bearing structure.

Appellant is also reminded that a term cannot be used when given a meaning which is repugnant to its usual meaning. In re Hill, 73 USPQ 482 (CCPA 1947). The appellant appears to be giving the term "load bearing structure" a narrow definition to include only vehicle roads or drilling pads as the only examples of "load bearing structures". The applicants are referred to lines 25-30, page 4 of their specification under BRIEF SUMMARY OF THE INVENTION wherein they state vehicle roads and drilling pads are examples of high load bearing civil engineering structures. The appellant appears to be holding hostage their own meaning of what they consider load bearing structure by excluding any other possibilities. Certainly, other cement materials are load bearing structures and are not simply limited to roads and drilling pads. The examiner also notes that appellant is violating *in re Hill* because load bearing structures are certainly not limited to roads and drilling pads.

It is further noted that it is improper for appellant to read the limitation of a vehicle road (or drilling pad) from their specification into their independent claims for the term load bearing structure. While it is true that the claims may be read in light of the specification, it is improper to read the limitations of the specification into the claims. *In*

re Yamato, 222 USPQ 93; *In re Wilson*, 149 USPQ 523; *Graver Tank v. Linde Air Products Co.*, 80 USPQ 451 (Supreme Court). Appellant certainly *does not claim* a road so they cannot assume load bearing structure means only a road. A road base also bears loads even if a sublayer to the road and can still be considered a load bearing structure. If appellant means *road* only by load bearing structure, then “road” should have been in the independent claims and not load bearing structure.

The appellant also argues the next step of adding asphalt yet this is still within the teaching of Polston. Again, Polston teaches adding asphalt emulsifier in column 2, line 48.

The appellant argues overlapping ranges with respect to Polston versus their own claims. In rebuttal, Polston does teach overlapping ranges because he teaches the same components as appellant and appellant in their own claims (see claim 1) provides no specific range of amounts and thus the same components would overlap. Polston in his own claim 1 also does not limit the addition of binder such as cement, fly ash, lime, kiln dust, or the like just like the appellant (see again col.2, line 46).

Appellant’s argument regarding claims 7, 11, 12, 14, and 15 are moot because appellant is correct in that Polston does not teach a mixture or combination of fly ash and cement. Note that fly ash is inclusive of both class F and class C fly ash depending where the source of fly ash is obtained (Wyoming for example for Class C and West Virginia for example for Class F). Still, Polston does not teach mixing together fly ash and cement (e.g. Portland cement) and thus these claims are allowable.

The appellant states the examiner did not address Claims 13 and 15-20 regarding limitations such as an unconfined compressive strength of at least 100 psi and various thicknesses. In rebuttal, as stated above:

Page 178 of the Standard Specifications for Construction of Highways, Streets and Bridges Edition published by the Texas Department of Transportation. This document teaches particulate road base Grade 1 is not required to have more than 45 psi of compressive strength while an intermediate quality of road base may have a value of as little as 35 psi, and acceptable particulate road base has no quantitative requirement at all for compressive strength. In rebuttal, this document does not necessarily teach away from the examiner's position because it merely states that Grade 1 is "not required" to have more than 45 psi compressive strength or intermediate road base about 35 psi. This document does not state that it *cannot or must not be greater than 45 psi* for road base compressive strength. Thus, there is a degree of choice and there is no upper limit on compressive strength for road bases. It may not be required or preferred to have higher than 45 psi compressive strength for road base but this does not mean the road base compressive strength cannot be greater.

It is thus possible by appellant's own admission based upon this standard specification submitted evidence from the Texas Highway Department of transportation that road base 1 is not required to have more than 45 psi of compressive strength. Not required does not mean it must have no more than 45 psi of compressive strength which leads open to the possibilities that a road base can even have a compressive strength as high or greater than 100 psi and thus meet the limitations of claims 13 and 16-20. (Note again that claim 15 is allowable because it depends back to claim 6 which requires a mixture of class C fly ash and Portland cement and thus any arguments toward this claim are now moot).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Response to Appellant's 1/22/07 Reply Brief:

Issue 1:

The appellants argue that in their claim 1 the examiner has not addressed the steps of their process (2.1.1), (2.1.2), (2.1.3), (2.2.2), and (2.2.3). The examiner respectfully disagrees. Nevertheless, applicants are referred to column 8, lines 18-22 of Polston wherein the following is stated:

After the material (mixture of drilling cuttings, Portland cement, and asphalt emulsion (see last paragraph of col.7 and first paragraph of col.8 of Polston) is thoroughly mixed in the pug mill, it is deposited on the ground and may be contained by a berm (ie this is appellant's (2.1.2) step of forming the cement mixture into the shape and size of the load bearing structure), and curing for about 48 hours typically.

It is also noted that the mixture will undergo a pozzolanic reaction in the same manner as appellants' process because Polston also teaches adding a pozzolan (see col.2 line 53) so Polston's mixture also will undergo a "pozzolanic" reaction.

Issue 2:

The examiner has already addressed this issue on page 6 of his first Examiner's Answer noting that Polston teaches the same exact components in the same amounts (notice appellants have absolutely no ranges of amounts for any specific components so it reads upon any amount for each component) and those resulting properties (ie sufficient resistance to rutting-see appellant's claim) would also have been expected to be the same. The examiner is not relying on any personal or common knowledge; only the teaching of Polston teaching the appellants' process adding the same ingredients in the same amounts which would have been expected to attain the same properties.

Issue 3:

Appellant does not mention an issue 3 but skips to Issue 4.

Issue 4:

The examiner has made a proper case of prima facie obviousness and again maintains that Polston teaches a process of mixing the same components in the same amounts as appellant and would result in the same properties absent evidence to the contrary. The appellant does have this burden if they wish to overcome the prima facie rejection. However, their failure to provide evidence thus does not overcome the examiner's rejection and the choice to not provide evidence is their own decision.

Issue 5:

The examiner maintains his obviousness rejection under 35 USC 103 is proper because Polston teaches the same components in the same amounts which would have thus been expected to achieve the same properties upon mixing and curing.

Response to Discussion of Specific Statements in Examiner's Answer:

The appellant makes the assertion that Polston does not teach a road base in the normal sense of the term in the art until the particulate material (mixture it is assumed) is spread in place at the construction site. In rebuttal, appellant does the same because they too spread the same mixture as Polston in place (formed into a shape) to make a load bearing structure. As stated above, (see last paragraph of col.7 and first paragraph of col.8 of Polston) Polston's mixture is thoroughly mixed in the pug mill, it is deposited on the ground and may be contained by a berm (ie this is appellant's (2.1.2) step of forming the cement mixture into the shape and size of the load bearing structure), The fact that Polston teaches it can be formed into a shape (it still assumes a shape even without a berm which he also teaches) meets applicants' claim limitations.

The appellant's statement that they believe there is "no" pozzolanic reaction in Polston after all the Polston components (same as appellant) are mixed is in error. Polston teaches adding *pozzolan* to his mixture so certainly the pozzolan in Polston's mixture would undergo a pozzolanic reaction (see col.2, line 53 of Polston).

The appellant also admits and agrees with the examiner's position in the first and second paragraphs of his reply brief. Appellant *admits and agrees* Polston's particulate matter (ie mixture) is a *load bearing structure*. The appellant is referred to claim 1 wherein they broadly claim a load bearing structure which is thus inclusive of Polston's road base. Again, appellant cannot read the limitations of a "road" into their broad claim 1 because they are not claiming a road. The examiner has given the claims their full breadth and scope and Polston's road base still meets the limitation of appellant's load

bearing structure. Appellant however disagrees that it would obtain their claimed rutting resistance. The examiner disagrees because Polston teaches the same process by mixing the same components in the same amounts which would have been expected by one of ordinary skill in the art to obtain the same properties (such as rutting resistance).

The examiner also stands by his position he made on page 6 of the examiner's answer. The appellants state in his page 8 reply brief response that he never used the phrase cannot be satisfactory in the context provided by examiner and they refer to Table 2 of their specification which refers to thickness requirements of their load bearing structure. The examiner still maintains that Polston's mixture (which as the same components in the same amounts) would result in the same properties (ie rutting resistance and compressive strength).

The appellant again argues with respect to "road base" (used by Polston) and "load bearing structure". The appellant again though indirectly admits Polston's roadbase is a load bearing structure in the third paragraph on page 9, third paragraph of his reply brief. The appellant explains what he really means for his position and what he really argues is that Polston does not mean "road base" but only the "particulate product" *that is suitable for spreading out later to create a real road base*. In rebuttal, if Polston teaches it can be used for a road base, he meets thus also teaches a road base! The appellant cannot ignore the teaching of the reference (ie the composition is used for a road base) because Polston most certainly teaches his composition is used for a road base. Polston clearly teaches that his composition (which contains the same

components as appellant in the same amounts) is used as a road base (See the preamble of claim 1 in col.11 of Polston) Finally, the appellant argues that the authorities (it is assumed Dr. Little's authority and declaration from p.17 of appeal brief) militate against any conclusion of obviousness. The examiner disagrees. Polston teaches a road base that contains the same components in the same amounts.

The appellant argues against the examiner's position regarding the fact that they contain no amounts for each component that alleges to provide them with their specific alleged unexpected property of rutting resistance. The appellant makes the examiner's point by admitting that Polston also does not teach the specific amounts of binder such as cement, fly ash, lime, etc. The same components in the same amounts would have been expected to have the same properties.

The appellant's instant claims means that any mixture comprising drilling cutting in any amount, even residual or trace amounts, and at least one of quicklime, hydrated lime, Portland cement, Class C fly ash, cement kiln dust, lime kiln dust, Class F fly ash, and other pozzolans in any amount, even trace or residual amounts, will provide a *rutting resistance such that any rut formed by such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch.*

It is also noted that appellant does not *claim* in their independent claim (ie claim 1) any specific thickness to obtain this property of rutting resistance for their load bearing structure (also called a subgrade which appears to refer also to a road base) and the recommended thickness ranges from a minimum of 8" up to 18" from Table 2 on page 26 of their specification. The appellants do not claim at least the minimum

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thickness required of 8 inches in independent claim 1 for their claimed load bearing structure. (Note: Appellant does claim a minimum 8 inch thickness in dependent claims 13 and 16-20 but cannot read this specific thickness of at least 8 mm into independent claim 1). Appellant notes in their specification on the top two lines of page 27 that the thickness values recommended in Table 2 (see p.26 of appellant specification) can accomodate at least 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch. This means that the road base of the prior art would have to be at a minimum at least 8 inches thick to achieve appellant's claimed property.

As stated before, Polston teaches his composition can be used as a road base. The examiner notes that a minimum thickness of 8 inches is required for a road base according to appellant's Table 2 in order to accommodate a rutting resistance such that any rut formed by such surface by 10,000 applications of a single axle load of 18,000 pounds will have a depth of rutting that is less than 1 inch. It is the examiner's position that one of ordinary skill in the art would have understood that a thickness of at least 8 inches for a road base is conventional and common knowledge in the art. (See MPEP 2144.03 regarding Reliance on Common Knowledge in the Art or Well Known in the Art)

The examiner takes official notice that though Polston does not explicitly teach a thickness of at least 8 inches for his road base material, this is a typical road base thickness which is conventionally and commonly known and used by one of ordinary skill in the art.

Prior Art Cited to Teach an 8 inch thick Road Base is Conventional:

The examiner presents the following as evidence supporting that it is conventional in the art that road base materials are at least 8 inches thick and thus would obtain applicants' claimed property for rutting resistance:

Weber (US Patent Number 5,766,338) teaches it is conventional to use a course of 4 inches as an initial stabilizer followed by a second course of about 8 inches to give about a 12 inch road base thickness (see col.24 lines 1-10). Note that Weber's road base, like appellant can comprise a waste material such as fly ash (see claim 1 in col.24).

Latta Jr et al. (US Patent Number 4,107,112) teach a typical road base or sub-base can be 20 cm (about 8 inches) and a wear course may be about 3 to 5 cm (about 1.2 inches to about 2 inches) which thus also teaches that a road base thickness of at least 8 inches is conventional (see col.4, lines 7-14). Latta Jr et al. also teach the thickness may be increased or decreased for the road base depending upon application. Certainly, one of ordinary skill in the road design/making art would have understood a thicker road base would allow for a greater load bearing applications.

The appellant's argument regarding claim 15 and its limitation of a minimum 8 inch thickness for the load bearing structure is moot because this claim is allowed. However, the appellant's arguments regarding claims 13 and 16-20 still apply. They state that Polston does not teach the minimum thickness (at least 8 inches) and

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minimum compressive strength of 100 psi and thus is not obvious over their instant claims. The examiner respectfully disagrees. The appellant does not disagree that Polston teaches a composition for a road base. A road base typically and conventionally is at least 8 inches thick and this is common knowledge to one of ordinary skill in the art. The examiner has provided Weber and Latta Jr et al. as evidence to support this position that this is conventional and common knowledge to one of ordinary skill in the art. Polston's road material would thus have to be at least 8 inches thick since this is conventional and common knowledge in the art and since he also teaches the same components in the same amounts, one of ordinary skill in the art would have expected Polston to have the same properties including rutting resistance and compressive strength as that claimed by appellant.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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